Obese Women Diagnosed With Larger, Later-Stage Breast Cancers

A new study finds obese women are more likely to have breast cancer detected at a later stage and to have lymph node metastases at the time of diagnosis than women who are not obese.

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Obese women are more likely to have breast cancer detected at a later stage and to have lymph node metastases at the time of diagnosis than women who are not obese, according to a study presented this week at the Annual Meeting of the American Society of Breast Surgeons.

“Obese women in our study had larger tumors than the non-obese women, but were less likely to find these cancers through a self breast exam. The majority of tumors were diagnosed through mammography. This suggests breast cancers may be more difficult to palpate in obese women. These results were highly significant,” said lead researcher Danielle Haakinson, MD, Surgical Resident at the Mayo Clinic in Arizona.

The research also found that obese women had a lower overall cancer survival rate, probably due to later stage disease at diagnosis. However, other illnesses associated with obesity may also affect patient survival. Additionally, obese women were less likely to undergo breast reconstruction after mastectomy.

This study underscores the importance of regular mammograms for obese women. “Without mammogram screening, breast cancer diagnosis may be delayed,” Dr. Haakinson comments. “The increased importance of mammographic screening in this growing patient population must be shared with both women and their primary care providers. Other studies have found that obese women are less likely to comply with regular breast cancer screening practices. This, combined with possible increased difficulties in finding a lump in large breasts, may contribute to the poorer breast cancer survival rate among obese women.”

In the study, researchers compared 327 women classified as obese by accepted body mass index standards (BMI>30) with 1025 patients not considered obese who were treated for invasive breast cancer from 2000 to 2008 at the Mayo Clinic in Arizona. They found that 10 percent fewer obese women were seen by doctors for evaluation of a mass found on a self breast exam than were non-obese breast cancer patients.

“While a number of factors may come into play, one distinct possibility is that obese women simply are less likely to examine their breasts or to examine them

thoroughly, possibly because they are uncomfortable with their body image," comments Dr. Haakinson. She notes that both surgical treatment and chemotherapy are more challenging in obese women because of increased complications such as poor wound healing and higher rates of diabetes and high blood pressure.

Noting that other research has uncovered a number of links between breast cancer and obesity, Dr. Haakinson says that her findings may result from a combination of factors. "Obese women are already at increased risk for breast cancer," she comments. "Now, this study shows that obese women present with more advanced stages of breast cancer."

"Interestingly, we did not find an increase in tumor characteristics associated with poor survival in obese women. Therefore finding their cancers when smaller would be very important for obese patients and might boost their survival rate."

Experts agree that obesity is a significant and growing health risk in America, and it has been linked to numerous cancers. Dr. Haakinson says that obese women must recognize that they are at increased risk for breast cancer in particular and should take steps to minimize the impact if they maintain their weight. She believes that systems should be in place to encourage comprehensive screening practices, including mammograms, clinical breast exams and breast self-exams for overweight women to diagnose breast cancer at earlier stages.

"The message is clear—obese women must be particularly vigilant in pursuing breast cancer screening by scheduling their annual mammograms and check ups. The good news is that these are relatively easy steps to take once a woman understands the positive impact on her breast health."

Abstract:

Title: Obese Patients Present with More Advanced Cancers: The Impact of Obesity on Breast Cancer

Objectives Obesity has been linked to many adverse health consequences including breast cancer. The effect of obesity on clinical presentation, tumor characteristics and ultimate outcome in breast cancer still needs to be defined. Our goal was to obtain a better understanding of the impact of obesity on breast cancer so as to aid healthcare providers in screening, counseling, and planning therapeutic interventions.

Method Retrospective review of a prospectively collected database of patients treated at a single institution for invasive breast cancer from 2000- 2008 was carried out. We compared two groups: women classified as non-obese (BMI<30) and women who were classified as obese (BMI>30). Continuous variables were compared between the two groups using ANOVA F-tests and categorical variables were compared using chi-square tests. Survival data was analyzed using Kaplan Meier analysis.

Results Of 1352 total patients, 1026 (76%) were classified as non-obese and 327 (24%) were obese. Although there was no difference in mean age between the groups, fewer obese breast cancer patients presented at young ages: 2% of obese patients <40 years old, 8% 40-50, and 90% >50 years (versus 4%, 14%, and 82% for non-obese patients, p=0.0019).

Obese patients were more likely to present with disease on imaging rather than by clinical exam (67% vs. 56%, p=0.0006). This difference was almost entirely due to a lower rate of obese patients presenting with masses on self breast exam (28% versus 38% for non-obese patients) as the rate of cancer presenting by the detection of a mass by clinical breast exam was 5% for obese patients and 6% for non-obese patients were similar (p=0.0066). 71% of obese patients had tumors <2cm versus 79% of non-obese patients, even though tumors in obese patients were less likely to be palpable (p=0.0045).

Obese patients were significantly more likely to have lymph node metastases (31% vs 25%, p=0.026). Rates of breast conservation therapy were 69% for obese patients and 70% for non-obese patients (p=NS), but obese patients underwent immediate reconstruction when they were treated with mastectomy only 29% of the time versus 47% of non-obese patients (p=0.0058).

No differences between groups were seen with regard to adjuvant therapy, recurrence, family history, or tumor markers (ER, PR, Her2). On multivariate analysis, obese patients trended toward a worse overall survival with a hazard ratio of 1.53 (95% CI 0.97-2.53).

Conclusions Obese patients are more likely to present with non-palpable tumors that are larger and have a higher rate of lymph node metastases compared to non-obese patients. Obesity does not appear to impact expression of tumor markers. Obesity did not result in differences in treatment except for a lower rate of immediate reconstruction among obese patients. Even though there was no difference in adjuvant therapy, obese patients had a worse survival, perhaps due to lead-time bias. Consequently, timely radiologic screening is critical in this group of patients.

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